



ICC-ES Evaluation Report

ESR-2664

Reissued September 2023

This report is subject to renewal August 2025.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 72 26—Ridge Vents

REPORT HOLDER:

LIBERTY PLASTICS, INC.

EVALUATION SUBJECT:

QUARRIX® RIDGE VENTS, OWENS CORNING VENTSURE® RIDGE VENTS (PRIVATE LABEL I) AND TOPSHIELD CRAFTGRADE™ RIDGE VENTS (PRIVATE LABEL II)

ADDITIONAL LISTEE:

OWENS CORNING

TOPSHIELD-SRS DISTRIBUTION

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012, and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012, and 2009 *International Residential Code*® (IRC)

Properties evaluated:

- Ventilation of attic spaces
- Weather resistance
- Wind uplift resistance

2.0 USES

The Quarrix®, VentSure® and CraftGrade™ ridge vents are installed in conjunction with eave, cornice, and soffit vents to provide natural ventilation of enclosed attic and rafter spaces.

3.0 DESCRIPTION

3.1 Ridge Vents:

The vents consist of multiple layers of corrugated polyethylene, classified as CC2 plastic under IBC Section 2606.4. The vents are available in standard profiles (six corrugated layers) and low profiles (four corrugated layers).³ The low-profile vents are available in both fold-out

and rigid-roll styles and may have a spun-bound polypropylene membrane adhered on the inside face.

3.2 Net-free Ventilation Area:

The net-free ventilation area is 19 square inches (123 cm²) per lineal foot (305 mm) of vent, for the standard profile vents, and is 12.7 square inches (82 cm²) per lineal foot (305 mm) of vent for the low-profile vents. See Table 1 for dimensions and product names.

4.0 INSTALLATION

4.1 General:

A 2-inch-wide (51 mm) slot is cut in the sheathing at the ridge, 1 inch (25.4 mm) on each side of the ridge, leaving a minimum of 6 inches (152 mm) of the sheathing inside the exterior wall line at each end. For roofs with a ridge board, a 3¹/₂-inch-wide (88.9 mm) slot is cut in the sheathing at the ridge, 1³/₄-inch (44.4 mm) on each side of the ridge board. A minimum of 6 inches (152 mm) of the roof sheathing at each end of the roof shall be left uncut. Table 2 provides a summary of the width of the slot measured along the roof slope from the ridge to the edge of the slot. The ridge vents are centered over the ridge and attached to sheathing by means of two nails on each end of the vent, one nail on each side of the ridge line. On 4-foot-long (1219 mm) ridge vents, the nails are spaced at a maximum of 46 inches (1168 mm) on center, 1 inch (25.4 mm) from each end. On longer vents, the nails are located 1 inch (25.4 mm) from each end and are spaced at a maximum of 48 inches (1219 mm) on center. The nails must be 0.125-inch-diameter-shank (3.2 mm), galvanized roofing nails with 0.385-inch-diameter (10 mm) heads and a minimum length such that the nails penetrate the sheathing a minimum of ³/₄ inch (19.1 mm), or through the thickness of the sheathing, whichever is less. The ridge vents must be covered with asphalt ridge shingles or wood ridge shakes that are attached to the roof structure by means of fasteners consistent with the fasteners used to attach the roof coverings without roof vents, but with increased fastener length to provide the minimum nail penetration. Exposed ends of the ridge vents must be sealed as described in the manufacturer's instructions. See Figures 1–3 for typical installation details.

4.2 Wind Resistance:

Under the 2018 IBC, when installation is in accordance with this report, the ridge vents are limited to use in areas subject to a maximum basic design wind speed of 130 mph (209

km/hr) on structures having a mean roof height of 40 feet (12.2 m) or less in Exposure D areas.

Under the 2015 IBC, 2012 IBC, 2018 IRC, and 2015 IRC, when installation is in accordance with this report, the ridge vents are limited to use in areas subject to a maximum ultimate design wind speed of 130 mph (209 km/hr) on structures having a mean roof height of 40 feet (12.2 m) or less in Exposure D areas.

Under the 2009 IBC, 2012 IRC, and 2009 IRC, when installation is in accordance with this report, the ridge vents are limited to use in areas subject to a maximum basic wind speed of 100 mph (161 km/hr) on structures having a mean roof height of 40 feet (12.2 m) or less in Exposure D areas.

5.0 CONDITIONS OF USE

The Liberty Plastics, Inc., Quarrix® Ridge Vents, Owens Corning VentSure® Ridge Vents and TopShield-SRS Distribution CraftGrade™ Ridge Vents described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The ridge vents are installed in accordance with this report and the manufacturer’s instructions. In the event of a conflict between the manufacturer’s instructions and this report, this report governs.
- 5.2 The ridge vents shall not be used in the construction of Occupancy Groups H, I-2, or I-3.
- 5.3 The ridge vents are installed on roofs having a minimum slope of 3:12 (25% slope).
- 5.4 The ridge vents must be installed only on roofs upon which a non-classified roof covering is permitted unless the following conditions are met:
 - 5.4.1 The building is equipped throughout with an automatic sprinkler system in accordance with IBC Section 903.3.1.1.
 - 5.4.2 The maximum area of a continuous ridge vent is 100 sf (9.29 m²) and the aggregate area of the vents and any light-transmitting roof panels must not exceed 25 percent of the floor area served.
 - 5.4.3 The vents must not be installed within 6 feet (1.8 m) of any exterior wall required by Section 705.8 of the IBC to have protected wall openings.
- 5.5 Wind resistance of the ridge vents is limited to those areas described in Section 4.2 of this report.

- 5.6 Roof diaphragm nailing requirements of the applicable code must be addressed, and the vent installation must be approved by the building official.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Attic Vents (AC132), dated February 2010 (editorially revised June 2019).

7.0 IDENTIFICATION

- 7.1 Labels on packages of ridge vents bear the Liberty Plastics, Inc., Owens Corning or TopShield-SRS Distribution company name and address, the product name (Quarrix®, VentSure® or CraftGrade™), the model designation, and the evaluation report number (ESR-2664). Each individual vent is either identified by a label that bears the Liberty Plastics, Inc., Owens Corning or TopShield-SRS Distribution company name and address; the Quarrix®, VentSure® or CraftGrade™ product name, and the model designation; or is embossed with the product name and type of vent.

- 7.2 The report holder’s contact information is the following:

LIBERTY PLASTICS, INC.
705 PENNSYLVANIA AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55426
(800) 828-6114
www.libertyplasticsinc.com
customerservice@libertyplasticsinc.com

- 7.3 The additional listees’ contact information is the following:

OWENS CORNING
ONE OWENS CORNING PARKWAY, 1C
TOLEDO, OHIO 43659
(419) 248-7060
www.owenscorning.com

TOPSHIELD-SRS DISTRIBUTION
7440 STATE HIGHWAY 121
MCKINNEY, TEXAS 75070
(469) 652-7135
www.topshieldproducts.com

TABLE 1—QUARRIX®, VENTSURE® AND CRAFTGRADE™ DESCRIPTIONS

PROFILE	WIDTH (inches)	LENGTH (feet)	PRODUCT NAME
Low Profile—Foldout	7, 9 and 11¼	4 and 8	Quarrix® Rigid Vent, Owens Corning VentSure® Low Profile, Owens Corning VentSure® with Weather Protector, TopShield CraftGrade™ StormStop™
Low Profile—Rigid Roll	7, 9 and 11¼	20 and 50	Quarrix® Rigid Roll
		20 and 50	Owens Corning VentSure® Roll, Owens Corning VentSure® Rigid Roll with Weather Protector
		20	TopShield CraftGrade™ StormStop™

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 in.²/lin. ft. = 2117 mm²/m.

¹See Figure 1 or additional data.

TABLE 2—WIDTH OF SLOT MEASURED ALONG THE SLOPE FROM THE RIDGE TO THE EDGE OF THE SLOT

ROOF PITCH (DEGREES)	WIDTH OF SLOT MEASURED FROM THE RIDGE ALONG THE ROOF SLOPE (IN)	
	No Ridge Board	Ridge Board
3:12 (14.0)	1	1 ⁷ / ₈
4:12 (18.4)	1 ¹ / ₈	1 ⁷ / ₈
6:12 (26.6)	1 ¹ / ₈	2
8:12 (33.7)	1 ¹ / ₄	2 ¹ / ₈
10:12 (39.8)	1 ³ / ₈	2 ³ / ₈
12:12 (45)	1 ¹ / ₂	2 ¹ / ₂
16:12 (53.1)	1 ³ / ₄	3

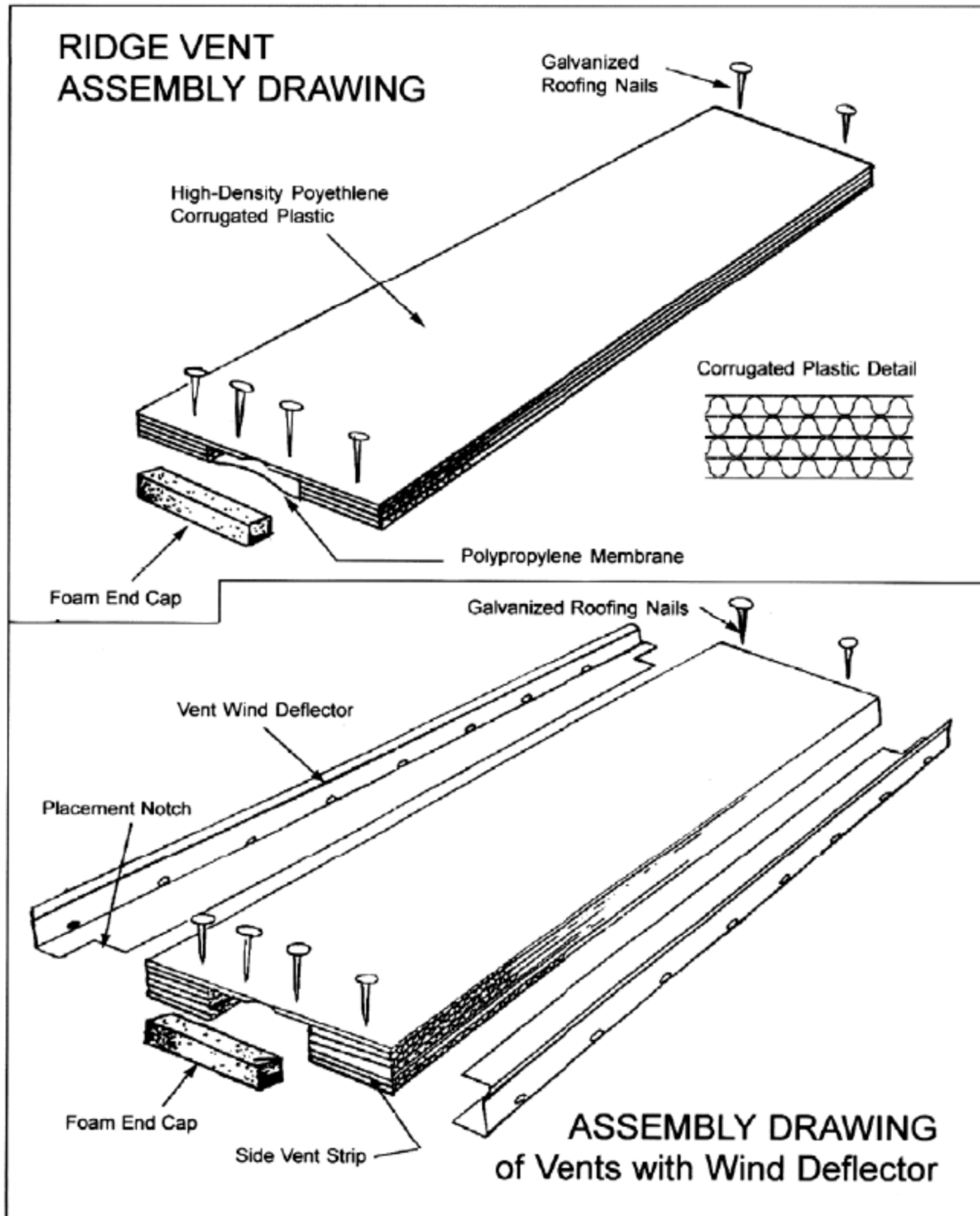


FIGURE 1

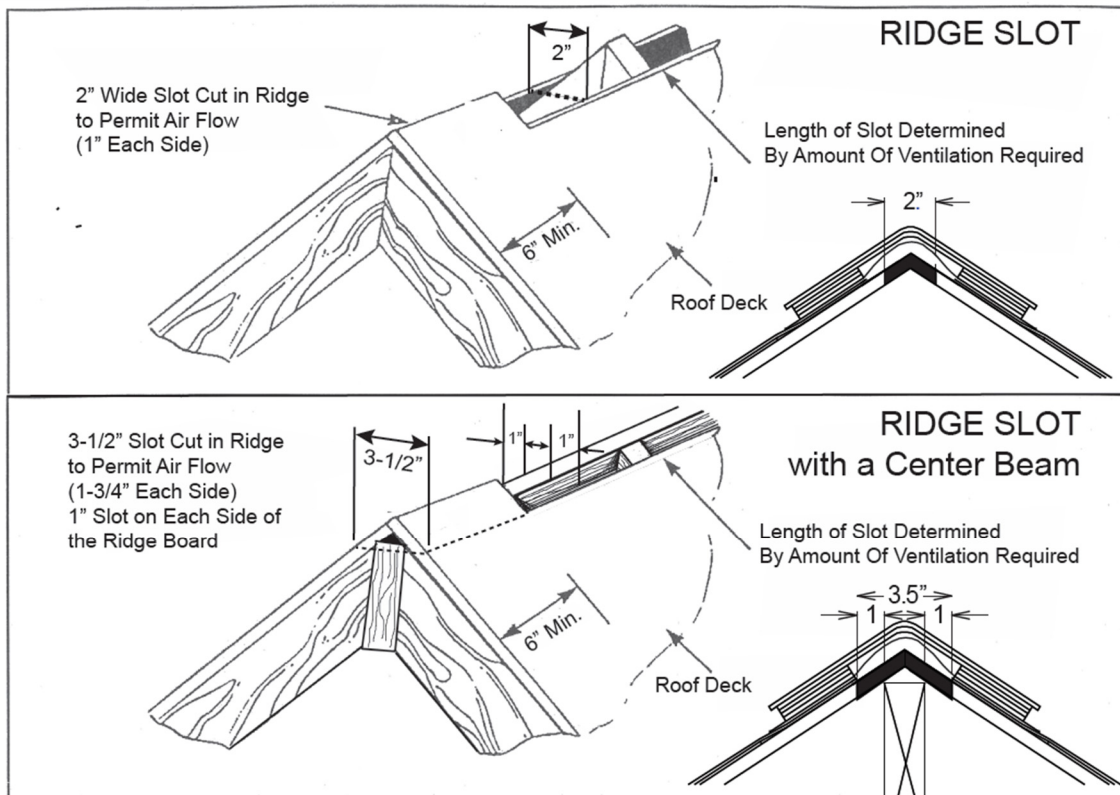


FIGURE 2

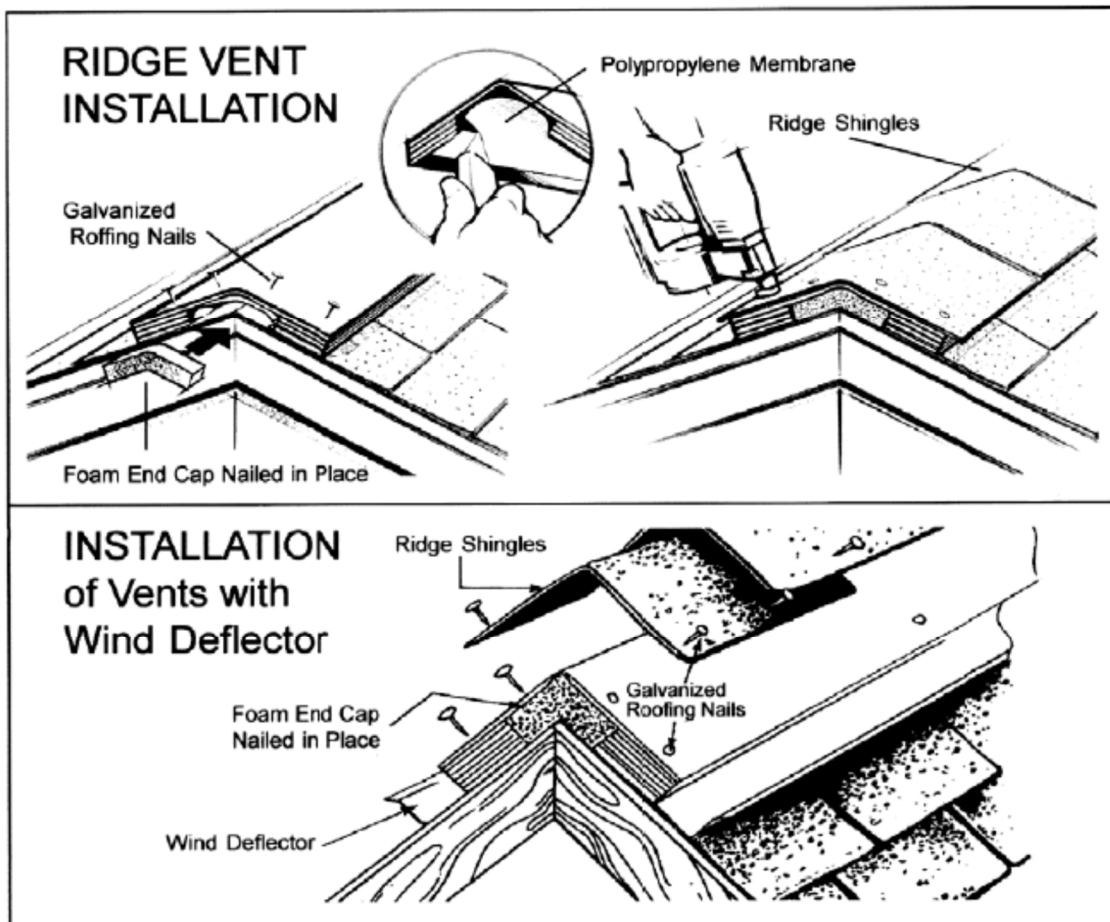


FIGURE 3

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Quarrix® Ridge Vents, Owens Corning Ventsure® Ridge Vents and TopShield CraftGrade™ Ridge Vents, described in ICC-ES evaluation report ESR-2664, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Quarrix® Ridge Vents, Owens Corning Ventsure® Ridge Vents and TopShield CraftGrade™ Ridge Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2664, comply with CBC Chapter 12, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 12, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Quarrix® Ridge Vents, Owens Corning Ventsure® Ridge Vents and TopShield CraftGrade™ Ridge Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2664, comply with CRC Chapter 8, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements for CRC Chapter 8, as applicable.

This supplement expires concurrently with the evaluation report, reissued August 2023.